

Inventor: Gary Baughman
Docket No.: MDYNEK/IP/RHE

CLAIMS

Having thus described the invention, I claim:

1. A container comprising:

a container wall having an opening therein, said opening capable of receiving a closure bushing with a sealing member wedged between said closure bushing and said container wall; and

means for permitting a portion of said container wall not in wedged engagement with said sealing member to bend in response to an external force so as not to deform the portion of said container wall in wedged engagement with said sealing member.

2. The container of claim 1 wherein said means for permitting bending in said container wall comprises a weakened portion of said container wall more susceptible to deformation caused by external forces.

3. The container of claim 2 wherein said weakened portion is annular to said opening.

4. The container of claim 3 wherein said annular weakened portion comprises a notch.

5. A container comprising:

a container wall;

a collar extending upwardly from said container wall and defining an opening, said opening capable of receiving a closure bushing with at least one sealing member wedged between said closure bushing and a portion of said collar; and

a weakened portion of said container wall or in a portion of said collar not in wedged engagement with said sealing member, thereby permitting said container wall or said collar to bend at said weakened portion in response to an external force so as not to deform said portion of said collar in wedged engagement with said sealing member.

6. The container of claim 5 wherein said weakened portion comprises a notch.

7. The container of claim 6 wherein said notch is located on the exterior surface of said container wall or said collar so that said container wall or said collar will bend inwardly at said notch in response to an external force.

8. The container of claim 7 wherein said notch is annular to said opening.

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9. A container comprising:

a container wall;

a collar extending upwardly from said container wall and defining an opening, said opening capable of receiving a closure bushing with at least one sealing member wedged between said closure bushing and a portion of said collar, said collar comprising:

a recessed wall connected to said container wall by a first annular wall to define a first recess area;

a second, inwardly sloped, annular wall connected to said recessed wall to define a second recess area;

an third, inwardly sloped, annular wall connected to said second, inwardly sloped, annular wall by a first upwardly extending flange, said third, inwardly slope, annular wall and said first flange defining said third recess area; and

a second, upwardly extending flange connected to said third, inwardly sloped, annular wall; and

means for permitting a portion of said collar not in wedged engagement with said sealing member to bend in response to an external force so as not to deform the portion of said collar in wedged engagement with said sealing member.

10. The container of claim 9 wherein said means for permitting bending in said collar comprises a weakened portion of said collar more susceptible to deformation caused by external forces.

11. The container of claim 10 wherein said weakened portion is annular to said second, upwardly extending flange.

12. The container of claim 11 wherein said annular weakened portion comprises a notch.

13. The container of claim 12 wherein said notch is located on a portion of said second, inwardly sloped, annular wall not in wedged engagement with said at least one sealing member.

14. The container of claim 9 wherein said second recess area contains said at least one sealing member wedged between said closure bushing and said second, inwardly sloped annular wall.

15. The container claim 9 wherein said third recess area contains said at least one sealing member wedged between said closure bushing and said third, inwardly slope, annular wall and said first flange.

16. The container of claim 9 wherein said second and third recess areas combined contain at least two sealing members wedged between said closure bushing and said second, inwardly sloped annular wall, said third, inwardly slope, annular wall, and said first flange.

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17. A container closure assembly comprising:

a container wall;
a collar extending upwardly from said container wall and defining an opening, said collar comprising:
a recessed wall connected to said container wall by a first annular wall to define a first recess area;
a second, inwardly sloped, annular wall connected to said recessed wall to define a second recess area;
a third, inwardly sloped, annular wall connected to said second, inwardly sloped, annular wall by a first upwardly extending flange, said third, inwardly sloped, annular wall and said first flange defining said third recess area; and
a second, upwardly extending flange connected to said third, inwardly sloped, annular wall;
a closure bushing comprising an internally threaded neck held within said collar and a radially outwardly extending base extending from the lowermost end of said internally threaded neck, said base nested within said first recess area;
a plug having an exteriorly threaded portion for threaded engagement with said internally threaded neck to provide closure to said closure assembly;
at least one sealing member wedged within said second and third recesses between said closure member and said a second, inwardly sloped, annular wall, said third, inwardly sloped, annular wall, and said first flange; and
means for permitting a portion of said collar not in wedged engagement with said sealing member to bend in response to an external force.

18. The container closure assembly of claim 17 wherein said means for permitting bending in said collar comprises a weakened portion of said collar more susceptible to deformation caused by external forces.

19. The container closure assembly of claim 18 wherein said weakened portion is annular and is located radially outwardly from said first, upwardly extending flange.

20. The container closure assembly of claim 19 wherein said annular weakened portion comprises a notch.

21. A container closure assembly comprising:

a container wall;
a collar extending upwardly from said container wall and defining an opening, said collar comprising:
a recessed wall connected to said container wall by a first annular wall to define a first recess area;

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a second, inwardly sloped, annular wall connected to said recessed wall to define a second recess area;

an third, inwardly sloped, annular wall connected to said second, inwardly sloped, annular wall by a first upwardly extending flange, said third, inwardly sloped, annular wall and said first flange defining said third recess area; and

a second, upwardly extending flange connected to said third, inwardly sloped, annular wall;

a closure bushing comprising an internally threaded neck held within said collar and a radially outwardly extending base extending from the lowermost end of said internally threaded neck, said base nested within said first recess area;

a plug having an exteriorly threaded portion for threaded engagement with said internally threaded neck to provide closure to said closure assembly;

at least one sealing member wedged within said second and third recesses between said closure bushing member and said a second, inwardly sloped, annular wall, said third, inwardly sloped, annular wall, and said first flange;

a gap defined by said sealing member, said second, inwardly-sloped, annular wall and said closure bushing base wherein a portion of said second, inwardly sloped, annular wall is not in wedged engagement with said at least one sealing member; and

means for permitting a portion of said second, inwardly-sloped, annular wall not in wedged engagement with said sealing member to bend in response to an external force.

22. The container closure assembly of claim 21 wherein said means for permitting bending in said second, inwardly-sloped, annular wall comprises a weakened portion therein more susceptible to deformation caused by external forces.

23. The container closure assembly of claim 22 wherein said weakened portion is annular about said second, inwardly-sloped, annular wall.

24. The container closure assembly of claim 23 wherein said annular weakened portion comprises a notch located on an exterior portion of said second, inwardly-sloped, annular wall so that an external force will cause deformation in said second, inwardly-sloped, annular wall therefore deforming said second, inwardly-sloped, annular wall into said gap thereby maintaining the seal wedge of said second recess area.

25. The container closure assembly of claim 24 wherein a portion of said second, inwardly-sloped, annular wall located radially outwardly from said notch engages said closure bushing base and acts as a pivot to ensure said second, inwardly-sloped, annular wall will deform inwardly at said notch.

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26. A method for preventing leakage from a container closure assembly, said method comprising the steps of:

providing a container having a container wall and an opening therein, said opening capable of receiving a closure bushing with a sealing member wedged between said closure bushing and said container wall; and

providing a weakened portion in said container wall, said weakened portion not being in wedged engagement with said sealing member, therefore said weakened portion will bend in response to an external force so as not to deform the portion of said container wall in wedged engagement with said sealing member.

27. The method of claim 26 wherein said weakened portion is annular to said opening.

28. A method for preventing leakage from a container closure assembly, said method comprising the steps of:

providing a container wall;

providing a collar extending upwardly from said container wall and defining an opening, said opening capable of receiving a closure bushing with at least one sealing member wedged between said closure bushing and said collar, said collar comprising:

a recessed wall connected to said container wall by a first annular wall to define a first recess area;

a second, inwardly sloped, annular wall connected to said recessed wall to define a second recess area;

an third, inwardly sloped, annular wall connected to said second, inwardly sloped, annular wall by a first upwardly extending flange, said third, inwardly sloped, annular wall and said first flange defining said third recess area; and

a second, upwardly extending flange connected to said third, inwardly sloped, annular wall; and

providing means for permitting a portion of said collar not in wedged engagement with said sealing member to bend in response to an external force so as not to deform the portion of said collar in wedged engagement with said sealing member.

29. The method of claim 28 wherein said means for permitting bending in said collar comprises a weakened portion of said collar more susceptible to deformation caused by external forces.

30. The method claim 29 wherein said weakened portion is annular to said second, upwardly extending flange.

31. The method of claim 30 wherein said annular weakened portion comprises a notch.

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32. The method of claim 31 wherein said notch is located on a portion of said second, inwardly sloped, annular wall not in wedged engagement with said at least one sealing member.

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